DOCUMENT RESUME

ED 155 614 CS 004 129

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TITLE A Comparison of the Reading and Language Skills Performances of Boys and Girls. Bulletin No. 9341.
INSTITUTION Wisconsin State Dept. of Public Instruction, Madison. Div. for Management and Planning Services.
PUB DATE Apr 77
NOTE 13p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Change Strategies; *Comparative Analysis; Elementary Secondary Education; Females; Grade 4; Grade 8; Grade 12; *Language Skills; Males; Reading Achievement; Reading Improvement; *Reading Research; *Reading Skills; *Sex Differences; Skill Development

ABSTRACT

Data collected in 1976 and 1977 point to significant differences in reading and related language skills achievements between male and female students in Wisconsin in the fourth, eighth, and twelfth grades. There are four theoretical explanations of this "achievement gap": interest in subject matter, sex role expectations, the earlier maturation of girls, and school environment. Suggested remedies to the problem include selecting reading materials that have high interest for boys, using male teachers or tutors, segregating by sex in the early years of elementary education, increased parental participation, and making teachers aware of the significant influence their attitudes can have on boys' reading skills development. (RL)

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A COMPARISON OF THE READING AND LANGUAGE SKILLS PERFORMANCES OF BOYS AND GIRLS

By

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Published By

Division for Management, Planning, and Federal Assistance
Wisconsin Department of Public Instruction

Information Series
Volume 6, Number 8
April 1977

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

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Bulletin No. 9341

CS004129

Introduction

A disparity in reading achievement between boys and girls at the elementary and secondary levels is widely recognized. The overwhelming percentage of "problem readers" in American schools are boys (Asher and Merkel, 1974; Johnson, 1976), who may account for as many as 90 percent of the children in remedial reading programs (Blom, 1971; Entwisle, 1971). An even more disquieting fact is reported by Bricklin and Bricklin (1969), who conclude that approximately two of every three eighth grade boys, of at least average intelligence, demonstrate a reading deficiency of some type.

Data collected over the past two years on students in the state of Wisconsin point to significant differences between males and females in reading and related language skills achievement. The table below shows the percentile scores of statewide samples of fourth, eighth, and twelfth grade students in reading and language skills (grammar, punctuation, and spelling). The figures show that girls average about 7 percentile points above the boys in reading at both the fourth and eighth grades. For the sample of twelfth grade students, there is a difference of 5 percentile points (favoring the girls) in 1976, with no difference in 1977.

The gap in language skills is even greater. The differences in scores favoring girls range from 13 percentile points in the fourth grade (in both 1976 and 1977) to 18 percentile points in the eighth grade on the 1977 assessment. For students in the twelfth grade the difference was 14 percentile points in 1976 and 12 percentile points in 1977.

Special thanks is given to Dale Johnson of the University of Wisconsin-Madison and Eunice Bethke and Darwin Kaufman of the WisconsinDepartment of Public Instruction for their substantive and editorial comments.

Percentile Scores of Wisconsin Fourth, Eighth, and Twelfth Grade Students in Reading and Language Skills: 1976 and 1977

		Reading		Language	
Grade	**Year**	**Males**	**Females**	**Males**	**Females**
FOURTH	1976	58	67	51	64
	1977	70	75	59	71
EIGHTH	1976	61	67	49	64
	1977	61	69	55	73
TWELFTH	1976	50	55	46	60
	1977	55	55	54	66

The test instrument used to compare Wisconsin students with a national norm group was the Comprehensive Tests of Basic Skills, a commercial test marketed by McGraw-Hill. National percentile scores indicate how well the average Wisconsin student performs in relation to other students across the country. Percentile scores range from 1 to 99. A percentile score of 75, for example, means that 75 percent of the national norm group scored lower on the test than the average Wisconsin student. It does not mean that the student answered 75 percent of the test questions correctly.

Four of the theories that attempt to explain the gap in reading and language skills achievement between boys and girls are discussed below. For purposes of organization, each theory is treated separately. The division, however, is arbitrary, for the various theories are closely interrelated.

Interest in the Subject Matter as an Explanation

Based on the finding that at a very young age boys and girls develop different (and often opposing) interests (Asher, 1975; Asher and Merkel, 1974), it is hypothesized that the poorer reading skills of boys are a direct consequence of a lack of interest in the subject matter of reading textbooks. Research by Asher and Merkel (1974) shows that if boys are interested in the subject matter, they read as well as girls.

> . . . it appears that when boys read more poorly than girls, it was because of low motivation rather than lack of skill. Since boys read as well as girls on the high-interest material, it indicates they had the ability to comprehend if they were motivated (p. 685).

Stanchfield (1973) suggests that boys have a special interest in reading about exploration, outdoor life, sports and games, sea adventures, and fantasy. It should not be implied that the subjects listed above would not be liked by girls; most girls would probably enjoy reading books in some of these areas.

In short, it is maintained that if the material is appealing, the reader will be more alert and a better reader. The same relationship between interest level and reading ability should also hold true for girls. If, as at least one critic claims, "Girls' stories" are largely ". . . limp, limited, and downright silly" (Women, 1972, p. 37), changes in the subject matter content might also improve the reading skills of girls. Still, there is the implication that girls need not be interested in what they are reading because reading is something "expected" of them. This theory is discussed below.

Sex-Role Expectations as an Explanation

A second theory contends that the poorer reading performances by young boys is a function of social-cultural expectations associated with being male or female. The theory is straightforward and suggests that the majority of people in this country deem reading as less appropriate for young boys than for young girls (Kagan, 1974; Stein and Smithells, 1969; and Gunderson, 1976). Gentile and McMillan (1976) note:

> There is ample observational evidence to show boys do consider reading and learning (as defined by the school) as being "girl" stuff. They have long considered the "book worm" an effeminate creature and quite openly criticize peer members who are successful in school. These activities are things girls are expected to do well, and being tough, athletic, comical, and rebellious are viewed by boys as being more appropriate "masculine" goals (p. 773).

There is an additional problem associated with reading and reading problems. As noted, the subject matter of most basic readers is said to be uninteresting to the majority of boys. This is the case even though males tend to be shown in lead positions and portrayed as more active, more

aggressive, and more successful. Analyses of introductory readers, including beginning picture books, arrive at a similar conclusion: these materials tend to promote sexism (Gunderson, 1976; Weitzman, et al., 1977; Marten and Matlin, 1976; and Schulwitz, 1976).

It is ironic that the basic readers may fail to serve the needs of either sex. Girls, who are more prolific and successful readers, are faced with materials that reinforce the traditional sex-role stereotypes. At the same time, these materials fail to appeal to the majority of boys.

The Earlier Maturation of Girls as an Explanation

A third theory points to the earlier maturation of girls as being critical. Because girls learn to speak at a younger age, they are said to possess an inherent advantage in subsequent language development, including writing, spelling, grammar, and learning a foreign language (Carroll, 1961; Garai and Scheinfeld, 1968; Lincoln, 1927; Smith and Carrigan, 1959; and Bentzen, 1966).

It is difficult to demonstrate a link between maturation and success in reading, partly because of the problem of differentiating physical maturation from the process of socialization. For example, it is likely that a boy or girl who matures physically at a younger age will be expected by adults to behave in a more "adult-like" manner. There is an additional complication due to the fact that the process of socialization makes different demands on children according to their sex. Traditional socialization patterns in the United States have defined certain behaviors as appropriate for girls: being quiet, attentive, (e.g., conforming to adult expectations), and nonaggressive. In contrast, most segments of American society allow boys more freedom and tolerate (or expect) them to be more active and aggressive. From this perspective, the socialization process and not physical maturation, accounts for the higher reading scores of girls. Success in reading requires quiet, attentive, and conforming behaviors; these behaviors are more likely to be demanded of young girls than of young boys.

Cross-national research by Prestin (1962) and Johnson (1976) substantiates the premise that a social-cultural theory (e.g., the socialization process) better accounts for variation in reading skills between boys and girls than a physical maturation theory. If biological or physical maturation is most important, it would be expected that girls would read earlier and better, regardless of the culture. Early research by Prestin (1962), comparing the reading abilities of fourth and sixth graders in the United States with

students of a like grade in Germany showed a pattern opposite that of the United States. In Germany young boys were more successful readers; in the United States young girls were the better readers. Prestin concludes that the critical variable is social-cultural, not biological.

A more recent study by Johnson (1976) compares the reading proficiences of elementary level students at three grade levels in four English-speaking countries: the United States, Canada, Nigeria, and Great Britain. In the majority of cases it was found that the boys scored higher on the reading tests in Great Britain and Nigeria. In the United States and Canada girls were more successful.

The case of Nigeria is especially interesting. Johnson notes that in northern Nigeria, where the sample of 206 was selected, education for boys is more highly valued. Education for girls is given a much lower priority. In addition, Johnson points out that more than three-quarters of the elementary school teachers are males, a factor that also might explain the higher success level of boys.

Johnson admits to certain research limitations. For example, students were not randomly selected from throughout the country under study. Nor was there an attempt to analyze the content of stories used to teach reading. Nonetheless, Johnson suggests that the data indicate tentative support for the thesis originally formulated by Prestin. Johnson makes the following observation about U.S. and Canadian socialization patterns:

> Parental and societal expectations for boys and girls vary among nations. It is my opinion that a sizeable number of adults in North America still consider reading a somewhat "sissy" or "feminine" pastime for boys. Many fathers would rather see their young sons toss a football or play hockey than stay inside and read a book (p. 750).

School Environment as an Explanation

A final theory maintains that schools are "feminine" institutions and that there is discrimination against boys. The concept, "feminine," as applied to schools, has two meanings. In the one case, it is noted that passive, quiet and orderly behavior is rewarded in school; contrary behaviors are punished. Since girls are more likely to behave in an orderly and quiet manner, and boys less likely, boys are said to be handicapped. In the second use of the concept, it is suggested that female teachers, who represent a

majority in the elementary grades, discriminate (consciously & subconsciously) against boys.

The use of the concept, "feminine," as it describes a school, is an unfortunate word choice. If "feminine" means being attentive and studious, it would be defensible to employ the label. However, such a definition of the word seems inappropriate. On the other hand, if it could be documented that discrimination against boys occurs because of their sex, the concept would have legitimate application. Research, however, indicates there is no support for the hypothesis that female teachers favor girls or that male teachers favor boys (Schell, 1969; Lahaderne, 1976). Rather, as shown by Felsenthal (1971), students of their sex who are judged by their teachers as hostile or aggressive are more likely to receive lower grades in school.

Remedies

As was stated earlier, the four theories seeking to account for variation in reading performance between boys and girls are closely interrelated. One theory, that girls read earlier and better than boys because they mature at a younger age, may stand apart. All others, however, emphasize the social learning process and point to the fact that boys and girls learn that different behaviors and values are appropriate. In the United States the process of socialization tends to favor girls in the acquisition of reading skills, for it teaches them attitudes and behaviors more conducive for success in beginning reading programs.

Within the body of literature on sex-related differences in reading achievement there are a variety of suggested remedies. Research shows that boys read better when their interest level is high. One of the most effective and direct tactics would be to select materials of high interest to boys. An even better strategy would be to select reading materials that are interesting to both boys and girls. Though this latter strategy might prove difficult, in theory it would benefit both boys and girls. Such a strategy, however, might do little to close the reading gap that favors girls.

Another strategy would call for the use of male teachers or male tutors. McFarland (1969) reports increases in the reading scores of first grade boys taught by male instructors. Although the gains were not statistically significant (when compared with the classes taught by women), McFarland suggests that the data point to a trend and would indicate that a balance of male and female teachers in the primary grades might help to minimize the differences in reading scores between boys and girls.

Additional studies also indicate the important role that male instructors can play (see Gentile and McMillan, 1976). Cascario (1972) showed that first grade boys taught by a male appeared to achieve at a level equal to, or slightly above, the level of male-taught girls and female-taught boys and girls. Tregaskis (1972) used a treatment consisting of three variables. Students in an experimental first grade group were shown a weekly twenty-minute slide presentation portraying male figures in roles promoting reading. In addition, beginning reading materials were chosen with special attention given to assure they were appealing to boys. Finally, middle school males were used to tutor students with reading difficulties. Tregaskis reports improvement in the reading skills of boys and also a change in the attitude that reading is "feminine." Unfortunately, the research design used by Tregaskis does not allow one to determine which of the three variables was most important.

Segregation of boys and girls in the early years of elementary school is an additional strategy that might be used. Strickler and Phillips (1970) segregated boys and girls at the kindergarten level and found that more positive attitudes toward school developed in the all-boy classes. One important benefit reported by Strickler and Phillips is that segregation by sex gave the teachers the opportunity to address the particular needs of each sex. In a similar study, Crawford, Elliot, and Johanson (1972) found that the reading scores of boys in grades 1-6 showed statistically significant gains in those classes employing a male teachers' aide.

Research by Stanchfield (1973) on sex-segregated instruction over a period of several years points to a number of specific strategies that can improve the listening skills, verbal facility, auditory discrimination, attentiveness, and motivational levels of boys. She suggests that it is especially critical that the exercises and materials be interesting and imaginative. Teaching lessons requiring a high level of student activity were seen as particularly valuable. Above all, Stanchfield emphasizes the need for positive reinforcement from teachers.

> It is apparent that boys need more motivation, specialized attention, practice, and reinforcement in almost every area of the learning process. Specific knowledge of the differences in learning patterns of boys versus girls can provide educators with insight into boys' achievement problems and can suggest the necessary attitudes and instructional approaches that will enable all male learners to master language skills with enjoyment, satisfaction, and, above all, success. Psychologists

> are aware that all learners need a "daily dosage" of success, and educators who have studied individual differences in learning know that boys need a double dosage (p. 33)

Implementation of any one or all of the strategies outlined above may prove extremely difficult. More feasible approaches are possible. The role that parents can play is significant and making them aware of the problems that boys have in learning to read might produce positive results. Fathers, in particular, would appear to have an especially critical role to play.

Teachers should be made aware of the significant influence their attitudes can have on the development of reading skills among boys. If they "expect" boys to be poorer readers, the self-fulfilling prophesy may prevail (see Glock, 1972). As indicated in the summary of cross-cultural research, it is not universal that boys are poorer readers than girls.

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